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**Developing a logic model to guide evaluation of impact for learning disability projects:  
the case of the Positive Behavioural Support (PBS) Academy**

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## **Abstract**

**Purpose** – Measuring “impact” is an important aspect of the dissemination of evidence-based practice and relevant to all disciplines. However, it has only recently become a focus of enquiry and is not commonly directly researched within the learning disabilities field. The present paper describes the process of developing a logic model for the UK Positive Behavioural Support (PBS) Academy as part of an evaluation and impact study of its work to date.

**Design/methodology/approach** – Logic models are a visual representation of the relationship between a project’s resources, activities and outputs and identified outcomes, in relation to key stakeholder groups. This representation allows for key impact measures to be identified and can be a useful tool for evaluation purposes. We used the process outlined by McLaughlin and Jordan (1998) to develop a bespoke logic model for the PBS Academy.

**Findings** – The model was particularly helpful in making clear the distinction between output and impact, identifying impact criteria differentiated by stakeholder group and across time-scales, and highlighting areas of activity that are needed to increase the impact of the work of the PBS Academy in the longer-term.

**Originality/value** – In the absence of any generalised impact evaluation frameworks in the learning disabilities field we suggest that logic models may provide a useful framework for evaluating the impact of policy, practice, and research interventions.

**Keywords** – Evaluation, Learning disabilities, Logic model, PBS Academy, Positive Behavioural Support (PBS)

**Paper type** – General review

## Background

Achieving impact is a desired outcome in any dissemination of evidence-based practice. That may seem obvious, but evaluating research impact is only relatively recently becoming a focus of enquiry. In the learning disabilities field, assessing impact is complicated because the delivery of policies and interventions are across health, education and social care sectors, include multiple stakeholder groups and community settings, and are across the lifespan.

The Research Excellence Framework (REF), which assesses the quality of research in UK higher education institutions, introduced impact as a measure of research quality for the first time in 2014, defining it as “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia” (Research Excellence Framework, 2011, p. 48). In their review of 2014 REF submissions, Chowdhury *et al.* (2016) found that the approaches taken to evaluate, measure and report impact, varied both across and within disciplines. Their findings suggest that standardised measures of impact may not be possible because different disciplines are likely to have different impact criteria, but that within disciplines certain themes are likely to be common. For “Clinical Medicine”, for example, quality of life, life expectancy, improved knowledge transfer, productivity of services and safety were commonly included in the impact criteria. No common processes for measuring impact were identified, and the authors conclude that in the absence of a generalised impact evaluation framework, research impact evaluation continues to be a challenge within academia.

Outside of academia, methods of evaluation are better established e.g. health (Donabedian, 1966), business (Porter, 1989) and public services (Gash *et al.*, 2008). Given the lack of an acknowledged framework for evaluating impact within the learning disabilities

field, we argue that it would be helpful to turn to “Logic Models” to guide questions of evaluation of policy, practice, and research interventions. Logic models are often used to evaluate the effectiveness of organisations, programmes and projects. They are a “visual representation of a theory of action or programme logic guiding the design and implementation of a programme or policy and can be used as a tool for building a relevant evaluation design” (Shakman and Rodriguez, 2015, p. 3). The logic model describes the relationship between a project’s resources, activities and outputs (particularly in relation to key stakeholders) and identifies short, medium and longer-term outcomes. Constructing a visual representation of these relationships facilitates the identification of critical impact measures. The model can also be used to communicate a shared understanding and expectations of a programme (McLaughlin and Jordan, 1998).

McLaughlin and Jordan (1998) outline a five-stage process of constructing a logic model. Stage one involves collecting relevant information. It is critical that this information comes from several sources including a review of documentation relating to a project as well as surveys and interviews with key stakeholders. This is an iterative, and therefore dynamic process that is conducted throughout the evaluation. In stage two, the need for, and context of the project is clearly outlined, the underlying assumption being that all activities are based on an understanding of the problem that the project seeks to address. This includes differentiating between the problems faced by different stakeholders. Stage three defines the elements of the logic model including categorising information collected into resources or inputs, activities, outputs, key stakeholder groups, short, medium and long-term outcomes and external factors. This information is used in stage four, to construct a visual representation of the links between each of the elements. This may be presented in different ways. The key is to make clear how activities relate to identified outcomes and their potential impact. The final step, stage five, verifying the model, is an iterative process. The model

becomes a working document, regularly updated, continues to be relevant, and can be used to identify and mitigate against risks, and as a planning tool for future activity to increase potential impact.

Although the use of impact evaluation frameworks within the learning disabilities field is limited, logic models have been used or referred to previously in research. La Valle (2016) used a logic model as one step in an evaluation of the Paving the Way project, the aim of which was to facilitate access to early intervention to improve the quality of life and outcomes experienced by children with learning disabilities who display behaviours that challenge. However, the process of developing the logic model was not described. Van Loon *et al.* (2013) acknowledged that logic models are a useful way of evaluating impact and drew upon aspects of the thinking behind logic models in a proposed model for selecting, developing, and implementing evidence-based outcomes in relation to quality of life. Similarly, Schalock *et al.* (2010) distinguished between logic models that provide a description of how specific programme components relate to a programme's desired results, and an operational model that may be used to identify desired outcomes, such as the quality of life construct.

As far as we are aware there are no studies which describe the process of developing a logic model in relation to the learning disabilities field. Using a logic model for both measuring and increasing impact could be advantageous within our field; the framework facilitates identification of areas where activities may have been less effective (such as dissemination to certain stakeholders), provides a means of helping achieve a shared understanding of programme objectives and allows researchers, services or project managers identify activities needed to improve impact.

In the present paper, we describe the process of the development of a logic model (McLaughlin and Jordan, 1998) to guide an evaluation and impact study of the work of the

Positive Behavioural Support (PBS) Academy. The PBS Academy is a collective of organisations and individuals in the UK working together to promote PBS as a framework for people with learning disabilities who are at risk of behaviour that challenges. The potential impact of its activities is already becoming apparent. The final report of the post Winterbourne consultation published in February 2016 (ACEVO, 2016, p. 6) acknowledges PBS as the recommended framework for working with people with learning disabilities at risk of behaviour that challenges; and states that “the nearest we have got to a Standard is the PBS Coalition’s<sup>1</sup> Competency Based Framework currently hosted on the PBS Academy’s website”.

### **Logic model development process**

#### **Collecting relevant information (stage one)**

The PBS Academy evaluation and impact study began in October 2016. Stage one, largely desk research, involved reading relevant literature and social media outputs to identify PBS Academy activities including resources produced, citations of PBS Academy activities, publications or resources in policy and practice documents, and the identification of key stakeholder groups. Analyses of the PBS Academy website ([www.pbsacademy.org.uk](http://www.pbsacademy.org.uk)) and Twitter feed; the Paving the Way website ([www.pavingtheway.works](http://www.pavingtheway.works)) which hosts copies of PBS Academy resources, and detailed conversations with those involved PBS Academy were also conducted. An internet survey gathered stakeholder views and experiences of the activities of the PBS Academy. For a more detailed description of the survey findings see Scott *et al.* (2018).

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<sup>1</sup> The PBS Academy was formerly known as the PBS Coalition.

## Clarifying the need (stage two)

People with learning disabilities sometimes develop behaviours that challenge others (Hastings *et al.*, 2013). The prevalence rate for severe challenging behaviour in people with a learning disability is estimated to be 4.6 per 10,000 (Lowe *et al.*, 2007) of the general population – approximately 24,000 individuals in England (a figure that more than doubles if less severe but still significant challenging behaviour is included), or approximately 18 per cent of all adults with learning disability known to services (Bowring *et al.*, 2017). PBS is currently considered best practice in the support of this population, and PBS and/or its components are recommended in several UK policy documents and professional guidelines (Denne *et al.*, 2015). The evidence base includes systematic and meta-analytic reviews of single-case and small group designs, a smaller number of randomised trials, and a UK randomised control trial of the outcomes from a PBS service (see summary in Gore *et al.*, 2013).

The overall aim of PBS is to improve the quality of a person's life and that of the people around them. The PBS Academy seeks to support this through promoting and increasing the use of PBS as a framework for supporting individuals with learning disabilities across the lifespan and by raising standards in the delivery of PBS. The context for the activities of the PBS Academy is partly the UK Government's Transforming Care programme (NHS England *et al.*, 2015). This seeks to improve services for people with learning disabilities and/or autism, who display behaviour that challenges, through system-wide change, enabling more people to live in the community, with the right support, close to home. The Transforming Care National Plan: Building the right support (NHS England *et al.*, 2015) references PBS, as do 38 of the 39 regional Transforming Care Plans that were publicly available in August 2017. However, PBS is not yet universally understood or available. Currently, PBS does not underpin the workforce development strategy in the care



sector. This has led to practice of variable quality (Denne *et al.*, 2015). It is difficult to find estimates for the workforce required to support this population. Data from the National Minimum Data Set for Social Care (Skills for Care, 2016) estimate the learning disability workforce in social care to be 121,000. This is approximately 8 per cent of the total adult social care workforce. However, these figures do not include health care or education, do not reflect the demand created by high turnover rates (25.4 per cent in adult social care, Skills for Care, 2015) or the fact that much care is provided by family and other unpaid carers. Designing and putting in place a sustainable workforce development plan for this population is a huge challenge particularly when coupled with the government's target of building capacity in local services and bringing people with learning disabilities back into their communities.

Within this context, the PBS Academy aims to raise standards in the delivery of PBS, to develop the capacity of local communities to support people with learning disabilities, and to ensure a system of support that produces and recognises competent staff in the effective delivery of PBS across different settings (Denne *et al.*, 2013)<sup>2</sup>

### **Defining the elements of the logic model (stage three)**

#### *Clarifying outputs*

Explicitly stating what the organisation, project or programme does is key in a logic model. The PBS Academy has completed four distinct phases of activities as well as lobbying/influencing policy-makers.

In phase one, four articles were published in the International Journal of Positive Behavioural Support (IJPBS) special edition (2013). The aim was to increase understanding

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<sup>2</sup> See detailed supplementary information available from first author 'Table 1 – A list of the objectives identified by the PBS Academy in support of its aims' (<http://wrap.warwick.ac.uk/106294/>).

of PBS and to discuss current issues related to the delivery of PBS (Hastings *et al.*, 2013; Gore *et al.*, 2013; Denne *et al.*, 2013; Allen *et al.*, 2013).

Phase two focussed on issues relating to workforce development and training including the development of a PBS Competence Framework (Positive Behavioural Support (PBS) Coalition UK, 2015) and a proposed model of four major inter-related phases to workforce development specific to PBS (Denne *et al.*, 2015).

Phase three focussed on the development of resources that map on to the PBS Competence Framework, produced in collaboration with, and tailored for specific stakeholder groups and contexts – people with learning disabilities, family carers, service providers, commissioners and support workers. These resources are intended to be a means of embedding the PBS Competence Framework into practice. In addition, there is a resource to check the quality of PBS provision. These are available on the PBS Academy website ([www.pbsacademy.org.uk](http://www.pbsacademy.org.uk)).

Phase four was the development of PBS standards for services and training providers: The PBS Academy has also been involved in non-phase specific activities contributing to national programmes including Transforming Care and workforce development initiatives, and to policies, guidance and reviews published by third parties. (e.g. NHS England *et al.*, 2015).<sup>3</sup>

#### *Clarifying inputs and process*

Inputs involve everything that has gone into the project's activities, including time and funding. This information is used to assess the effectiveness of processes and resources used to achieve outputs (value for money/available resources). Projects completed by the PBS Academy have generally followed a similar process of holding small, focussed co-

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<sup>3</sup> See detailed supplementary information available from first author 'Figure 1 – A summary of third-party activities that the PBS Academy has been involved with and influenced' (<http://wrap.warwick.ac.uk/106294/>).

production workshops (involving experts and members from key stakeholder groups), core writing and final peer review. Funding from third-party sources covered the costs of workshops, project management time and a project writer, with many individuals providing their time free of charge. This process allowed for resources to be produced quickly, cost efficiently, to a high standard and, crucially, with involvement of key stakeholders.

### *Clarifying outcomes*

Outcomes are the desired effects of a programme over the short, medium and long term.<sup>4</sup> Unlike activities, inputs and processes (described above) which are factual, outcomes are anticipated and agreed upon by a process of detailed consultation with stakeholders. PBS Academy outcomes were set partly by current context (e.g. the Transforming Care goal of decreased numbers of people with learning disabilities in assessment and treatment units), partly in relation to a perceived need (e.g. professional recognition and career structure for staff working within a PBS framework) and in part by the PBS implementation research agenda (e.g. all people with learning disabilities having access to PBS and being able to benefit from high-quality evidence-based support).

Outcomes are especially important for evaluation purposes as they define areas to measure including: process (measuring programme activities, e.g. citations of PBS Academy in publications, resources, policy and practice documents); impact (measuring the programme's immediate effects, e.g. stakeholder satisfaction measures); and outcome (concerned with the long-term programme effects, e.g. quality of life improvements for people with a learning disability whose behaviour challenges, their families and those who support them). Adopting a logic model approach to measuring impact means that the REF definition of impact maps most closely onto "outcome measures".

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<sup>4</sup> See detailed supplementary information available from first author 'Table 2 – The PBS Academy outcomes' (<http://wrap.warwick.ac.uk/106294/>).

### *Clarifying stakeholders*

The PBS Academy is trying to effect change for specific groups of people including, but not restricted to, people with learning disabilities, their families, professionals, commissioners and policy-makers. Placing those who may benefit from activities in the middle of a logic model, helps focus attention on the value of differentiating stakeholder needs, potential benefits and the activities required to meet these. It is important to note that not all stakeholder benefits will be achieved in the short or medium term and may require long-term input and influencing (not solely by the PBS Academy).<sup>5</sup>

### *Clarifying external factors*

For any project, there will inevitably be factors within the wider context outside of the project's control that will influence or affect the outcomes. As external factors may facilitate or limit the outcomes set out by a project, it is important to identify key ones to be able to consider their potential influence on achieving outcomes.

The Transforming Care Programme, part of the context of the PBS Academy's work, is being conducted against a backdrop of factors such as government cuts to services and budgets, a proposed shift of provision of care from health to social services with care delivered within local communities (despite a lack of professional recognition, regulation and a career infrastructure in the social services sector), a NHS infrastructure which has competing priorities, and the putative impact of Brexit on the care sector (workforce supply).

## **Constructing and verifying the logic model (stages 4 and 5)**

A logic model diagram based upon the elements outlined above was constructed and shared with the PBS Academy to achieve consensus (Figure 1). The development of a logic

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<sup>5</sup> See detailed supplementary information available from first author 'Table 3 – A summary of the stakeholder groups that the PBS Academy has identified as critical to the successful implementation of services delivered under a PBS framework, and the benefit it seeks for each group' (<http://wrap.warwick.ac.uk/106294/>).

model is an iterative process. It becomes a working document, accounting for inevitable changes in elements of the model (e.g. context changes, progress towards outcomes, new outputs), which are used to measure impact and inform a more strategic approach to co-ordinating/planning and prioritising future activities (ensuring activities are logical steps to meet outcomes within the context, aims, external factors, assumptions).

## **Discussion**

Assessing impact according to a REF definition (longer term effects outside of academia) is complicated in the learning disabilities field. Interventions and policy are relevant across the lifespan; they are delivered within health, education and social care settings and involve multiple stakeholder groups, including family and other unpaid carers. Developing a logic model for the PBS Academy to guide evaluation of “impact” and inform its strategic agenda illustrates the value that this approach may have for other learning disability projects.

### *Identification of impact measures*

The process has clarified the distinction between outputs (the “things” that are produced) and outcomes (resulting change) and has facilitated the identification of outcome measures (differentiated by stakeholder group and across time scales) and the collection of relevant data. These data are being used to shape the strategic agenda of the PBS Academy.

### *Identifying gaps and process issues*

The logic model has identified areas where activities have been less effective, such as the development of resources for certain stakeholder groups (e.g. allied health professionals) and within specific regions, such as Scotland. More importantly, at a process level, it has

focussed attention on the need to engage more effectively with a clearly identified set of stakeholders involved in affecting cultural change, and the recognition that whilst certain activities require collaboration and co-production across sectors (anything that requires system change); others are more effectively achieved by small, focussed working groups (the development of resources for specific purposes).

### *Setting the strategic agenda*

It has helped make clear that for PBS to be adopted more widely, there needs to be greater strategic focus on changing policy and culture at national, regional and individual provider levels than there has been to date. Achieving cultural change will be a long-term process. The priorities going forward are to develop a shared understanding of, and commitment to, PBS across all stakeholders (people with learning disabilities, family and carers, commissioners, provider organisations, direct support workers, training providers, government inspection teams, other health and social care professions and third sector organisations), a workforce development and training strategy across all levels of service provision, and the establishment of an external and independent process by which standards for PBS training and delivery can be validated.

### *Communication of a shared understanding*

The logic model has provided a means of communicating the rationale of the PBS Academy goals and activities to a wider audience including those that it seeks to influence and in so doing helped to identify the very significant role that others need to play in the dissemination of PBS and the PBS Academy's work.

### *Conclusion*

“Impact” from the perspective of the PBS Academy will be achieved when outputs go beyond a set of recommendations and into a set of tangible activities that bring about the creation of an infrastructure that facilitates workforce development around PBS in the learning disability sector. This includes (for example) the steps necessary to establish a verification system of standards of PBS practice; the establishment of a career path for support workers as PBS practitioners; and building local capacity for the delivery of front line services. There is also a need to measure the longer term effects which have not been explored in depth within this paper. Ways to measure longer term impact might include longitudinal quality of life studies for people with a learning disability whose behaviour challenges and their families/carers; stakeholder-specific self-efficacy/confidence measures (direct care workers, commissioners of services, families and carers, people with learning disabilities, provider organisations) and stakeholder satisfaction measures (e.g. of the quality of provided services and supports).

Developing a logic model has provided a useful framework for the PBS Academy evaluation and impact study. There is an increased focus on the importance of evaluating impact and a lack of a generalised framework for evaluating impact in the learning disabilities field. We suggest that using logic models to guide evaluation of impact for learning disability practice, policy and research interventions fills that gap.

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Figure 1 - PBS Academy logic model (working document)

